

DROSER × DORK’S PINK A MAN-MADE PYGMY *DROSER* HYBRID BETWEEN *DROSER* *LASIANTHA* AND *DROSER* *CALLISTOS*

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Keywords: *Drosera* × Dork’s Pink Hancock & Lowrie, *Drosera lasiantha*, *Drosera callistos*, pygmy *Drosera* hybrid, Australian pygmy *Drosera*, man-made pygmy *Drosera* hybrids.

Abstract: *Drosera* × Dork’s Pink Hancock & Lowrie (Figs. 1, 2, 3, & 5) is the first man-made pygmy *Drosera* hybrid to be acknowledged in the literature (Lowrie 2014). The hybrid is a cross between *Drosera lasiantha* Lowrie & Carlquist (female parent) (Lowrie & Carlquist p. 100, 1992; Lowrie p. 192, 1998) and *Drosera callistos* N.G. Marchant & Lowrie (male parent) (Marchant & Lowrie p. 321, 1992; Lowrie p. 30, 1989). This hybrid was produced in the spring of 2000. The hybridization materials and methods are recorded; a description of the hybrid is presented; the parent plants as well as the hybrid are photographically illustrated; and the etymology for “Dork’s Pink” is explained.

Materials & Methods.

The man-made hybrid *Drosera* × Dork’s Pink was made by John Hancock (co-author of this paper), of Eukey near Stanthorpe, Queensland, between *Drosera lasiantha* Lowrie & Carlquist being the female parent and *D. callistos* N.G. Marchant & Lowrie being the male parent.

In the spring of 2000, at the start of the Australian pygmy *Drosera* flowering season, the crossing of these two species was undertaken. Through these endeavours the beautiful hybrid, named *Drosera* × Dork’s Pink was created. The materials and methods used to produce this hybrid are recorded in the steps 1 to 7 as follows.



Figure 1: Close up of the flowers of the man-made hybrid *Drosera* × Dork’s Pink. Photo by John Hancock.

1. Each species of the pollen parent *Drosera* was allocated a different colour of cotton thread; e.g. for *Drosera callistos*, orange was used.
2. When pollinated, the pedicel of the recipient *Drosera* flower (the female parent), was tied with a piece of thread of the corresponding pollen donor (the male parent) colour.
3. In this way, it was possible to pollinate different flowers on the same flowering scape with pollen from several species, in each case indicating the pollen donor with species-specific coloured thread. At the end of flowering, the pollen recipient plant looked like a Christmas tree, with all its pedicels tied in various colours of cotton thread.
4. When all the flowers had dried and the seed capsules turned brown, each cross was collected separately.
5. In the spring of 2001, these crosses were planted with each cross assigned to a separate container with no special treatment.
6. Out of all the crosses made (which were numerous), only one hybrid germinated. This resulted from a cross between *Drosera lasiantha* (female parent) and *Drosera callistos* (male parent).
7. When it came to flowering, waiting for the first bud of this hybrid to open seemed to take forever. When it did open, it had twice the number of petals expected and a beautiful pinkish colour. All the flowers of that season each had over 5 petals. The following season, the flowers reverted to their normal 5 petals each.

Description

A fibrous-rooted perennial herb, plant forming a compact rosette, 1.5–2 cm in diameter, appressed closely to soil surface. Stem 5–10 mm long, covered with remains of previous seasons' growth. Active leaves 12–18 per rosette; petiole 4–5 mm long, 0.7–0.8 mm wide for most of its length, narrowing to 0.5–0.6 mm wide at lamina, lenticulate in section ca. 0.3 mm thick, sparsely scattered with minute, translucent white glands on the abaxial surface, as well as margins, adaxial surface glabrous. Lamina broadly elliptic, 2.3–2.5 mm long, 1.8–2 mm wide, adaxial surface with insect-catching glands positioned around margins and smaller glands within, abaxial surface moderately covered with translucent white trichomes bearing translucent white apical glands. Stipular bud ovoid, shaggy, 3–4.5 mm long, 3–4 mm in diameter at base; stipules 4.3–4.5 mm long, 3–3.5 mm wide, 1.3–1.5 mm wide at base, 3-lobed; central lobe lacerated into 3 segments, central one shortly divided into 5 laciniae at apex, lateral ones each shortly divided into 3 laciniae at apex; lateral lobe outer margins \pm entire, lacinate across apex with 3 laciniae, innermost lacinia equal in length of central lobe. Gemmae ovate, ca. 1.3 mm long, ca. 1.3 mm wide, ca. 0.9 mm thick. (Fig. 6) Inflorescence 1 per leafy rosette, 4.5–7 (mostly 6–7) cm tall including peduncle, forming a crowded 10–18-flowered scorpioid cyme; peduncle basal portion sparsely covered with translucent white glandular trichomes, glandular density increasing towards the apex and throughout the inflorescence; pedicels 1.8–2 mm long, semi-erect in sterile fruit, moderately covered with translucent white glandular trichomes ca. 0.1 mm long. Bracts mostly absent, shortly filiform when present. Sepals \pm broadly elliptic or broadly ovate, 2.8–3 mm long, 1.3–1.5 mm wide, margins entire, apex irregularly serrate, moderately covered with translucent white glandular trichomes ca. 0.2 mm long. Petals adaxial surface pinkish orange, black at base and extending a little upwards along the mid vein, together (as 5 petals) appearing overall star-shaped and surrounded by red flaring, abaxial surface pink, with distinctive red radiating and branching venation, obovate, margins entire, apex \pm slightly irregularly crenate, 7–8 mm long, 4–4.5 mm wide. Stamens 5, 1.5–2 mm long; filaments black-



Figure 2: Side view of the man-made hybrid *Drosera* x Dork's Pink plant (left); and cluster of *Drosera* x Dork's Pink plants with their scapes arising bearing juvenile flower buds (right). Photos by John Hancock.



Figure 3: Overhead view of the flowers in a pot of man-made hybrid *Drosera* x Dork's Pink plants. Photo by John Hancock.

ish maroon; anthers and pollen yellow. Ovary blackish maroon, broadly obovoid, 0.6–0.7 mm long, 0.8–0.9 mm in diameter. Styles 3, blackish maroon, horizontal, terete, 0.5–0.6 mm long, ca. 0.1 mm in diameter; stigmas reddish maroon, slightly curved above the horizontal, clavate, 1.5–1.6 mm long, dilating towards apex to ca. 0.2 mm in diameter, then tapering to ca. 0.1 mm near the rounded apex, papillose. Seeds absent (a sterile hybrid).

Etymology

The epithet, “Dork’s Pink” honours John Hancock’s Blue Cattle Dog bitch, “Dork” who died of cancer in 2002 and the colour “pink” after the principal base colour of the flowers of this man-made pygmy *Drosera* hybrid.



Figure 4: “Dork” the blue Cattle Dog bitch. Photo by John Hancock.

Notes

In 2010, one of us (AL) delivered some presentations on Australian carnivorous plants at the 8th International Carnivorous Plant Conference at Hortus Botanicus Leiden, The Netherlands. In their greenhouse a number of pots full of beautiful, man-made pygmy *Drosera* hybrids were observed. Following inquiries, revealed that the hybridizer responsible for these crosses was located in Germany. On returning to Australia, (AL) was able to track down Dieter Kadereit, of Offenbach, Germany, directly.

Dieter is now an important research colleague and has been provided with new pygmy *Drosera* material to work with. Importantly, this material is of good provenance, with full collection data and associated herbarium vouchers attached.



Figure 5: Front view of the flowers (left); and back view (right) showing the dark reddish veining on each of the petals. Photos by Allen Lowrie.

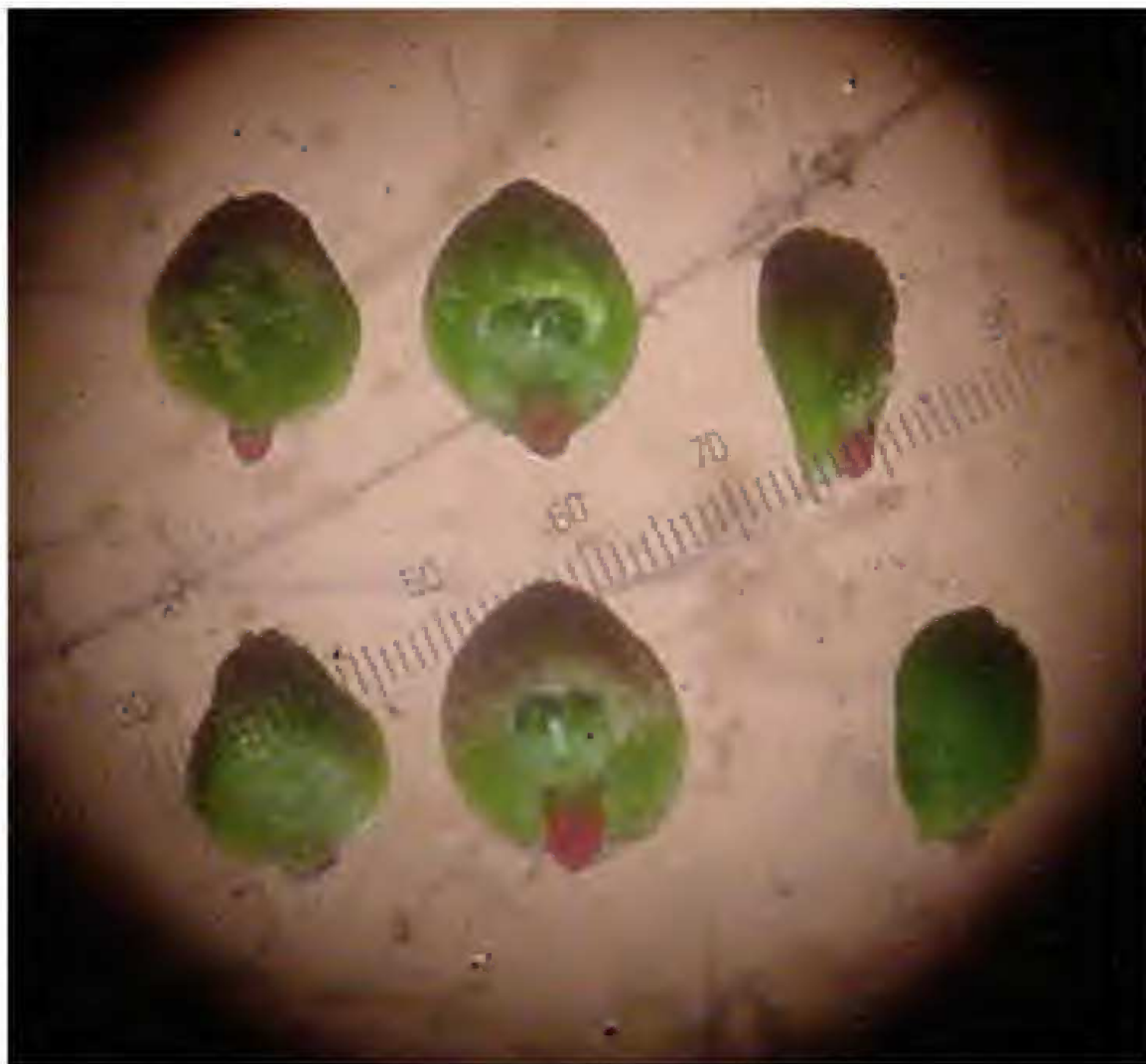


Figure 6: Micrograph of the gemmae of *Drosera* × Dork's Pink. Each set of three showing from left to right: back view of gemma; front view of gemma with embryonic root contained in a transparent tube like sheath with two juvenile leaves ready to unfurl once the gemma is in its growing position on the soil; side view of the gemma, note the wart-like appendages on the apex of the gemma. Scale between numbers 40, 50, 60, etc. = 1 mm. Micrograph photo by Allen Lowrie.

Dieter is currently experimenting with various pygmy *Drosera* crosses. Seed set between quite unrelated pygmy *Drosera* crosses is proving to be extremely low, and often only one or two potentially viable seeds are produced per cross. At the time of the *Drosera* × Dork's Pink breeding period in the year 2000 it was also established that only very few viable seeds were ever produced with crosses between two different pygmy *Drosera* species.

Under the controlled conditions of horticulture, this is not an issue, as even one plant successfully raised from seed can, when mature, be quickly propagated once gemmae production is initiated. In a few seasons, these single hybrids can be amplified into a large quantity of plants, all exact clones of the first.

Investigations to date have shown that when one uses either *Drosera omissa* or *D. pulchella* as a parent, the seeds from that cross are likely to be viable and easy to germinate. This is probably a legacy of these species' special ability to increase their numbers rapidly following drought. They are

able to generate a new population of plants very quickly once conditions improve, as the seeds of these species have few requirements in order to be induced into germinating. Given a little moisture and appropriate temperatures, they start to germinate rapidly. This is doubtless an asset for the continued survival of the species in nature, and is valuable in cultivation.

Most Australian carnivorous plant seeds remain in a state of dormancy for as long as it takes for all the right conditions to be in place for germination. Many species require fire, or the chemicals generated by smoke, to instigate the germination process. It is species with these difficult to germinate seeds that make hybrid seed germination very difficult. Experiments to find the right methods to unlock the dormancy of these pygmy *Drosera* species are ongoing, and include chemical inducement as well as simulated stratification.

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